In the Claims

This listing of claims will replace all prior versions, and listings of claims in the application. Currently amended claims are shown with additions underlined and deletions in ~~strikethrough~~ text or double brackets. No new matter is added by these amendments.

Claims 1-9 (Canceled)

Claim 10 (Currently Amended) An optical communication system for transmitting a soliton or substantially soliton pulse, comprising

a plurality of dispersion elements, each dispersion element from the plurality of dispersion elements including at least a fiber length and a discrete dispersion compensator, the fiber length and discrete compensator having different dispersions, wherein the path average dispersion of the plurality of dispersion elements is anomalous.

Claims 11-42 (Canceled)

Claim 43 (Previously Presented) An optical communication system comprising

a plurality of sections, each section including at least two dispersion elements that have dispersions of opposite sign, wherein the plurality of sections permits propagation of a stable or quasi-stable optical pulse, and wherein the optical pulse has a time-bandwidth product greater than a time-bandwidth product of an optical pulse that is Gaussian in shape.

Claim 44 (Previously Presented) The optical communication system of claim 43, wherein the optical pulse alternately expands and compresses as it propagates through the sections.

Claim 45 (Previously Presented) The optical communication system of claim 43, wherein the path average dispersion of the plurality of sections is zero or anomalous.

Claim 46 (Canceled)

Claim 47 (Previously Presented) The optical communication system of claim 43, wherein the difference between the dispersion magnitudes of the two dispersion elements is less than 12 ps^2/Km.

Claim 48 (Previously Presented) The optical communication system of claim 47, wherein the difference between the dispersion magnitudes of the two dispersion elements is less than 4 ps^2/Km.

Claim 49 (Previously Presented) The optical communication system of claim 48, wherein the difference between the dispersion magnitudes of the two dispersion elements is less than 0.1 ps^2/Km.

Claim 50 (Previously Presented) The optical communication system of claim 43, wherein the two dispersion elements of a section comprise an optical fiber length and a discrete dispersion compensator.

Claim 51 (Canceled)

Claim 52 (Previously Presented) The optical communication system of claim 10, wherein the discrete dispersion compensator is fabricated from a highly dispersive material.

Claim 53 (Previously Presented) The optical communication system of claim 11, wherein at least one of the discrete dispersion compensators is fabricated from a highly dispersive material.

Claim 54 (Previously Presented) The optical communication system of claim 10, wherein the soliton or substantially soliton pulse has a time-bandwidth product greater than the time-bandwidth product of a Gaussian-shaped pulse.

Claim 55 (Previously Presented) The optical communication system of claim 11, wherein the soliton or substantially soliton pulse has a time-bandwidth product greater than the time-bandwidth product of a Gaussian-shaped pulse.

Claim 56 (Currently Amended) A method of optical communication comprising:

generating a plurality of optical pulses; and

launching the plurality of optical pulses through an optical communication system comprising a plurality of dispersion elements, each dispersion element from the plurality of dispersion elements including at least a fiber length and a discrete dispersion compensator, the fiber length and the discrete dispersion compensator having different dispersions, wherein the path average dispersion of the plurality of dispersion elements is zero or anomalous, such that the optical pulses are transmitted as soliton or substantially soliton pulses.

Claim 57 (Canceled)

Claim 58 (Previously Presented) A method of optical communication comprising:

generating a plurality of optical pulses; and

launching the plurality of optical pulses through an optical communication system comprising a plurality of sections, each section including at least two dispersion elements that have dispersions of opposite sign, wherein the plurality of sections permits propagation of corresponding stable or quasi-stable optical pulses, and wherein the stable or quasi-stable optical pulses have a time-bandwidth product greater than a time-bandwidth product of optical pulses that are Gaussian in shape.